DOCUMENT RESUME

ED 099 226 88 SE 018 306

AUTHOR Kraynak, Ola
TITLE Freddie Fish. A Primary Environmental Study of Basic Numerals, Sets, Ordinals and Shapes.
INSTITUTION Broward County School Board, Fort Lauderdale, Fla.
SPONS AGENCY Bureau of Elementary and Secondary Education (DHEW/OE), Washington, D.C.
PUB DATE 73
NOTE 19p.

EDRS PRICE MF-$0.75 HC-$1.50 PLUS POSTAGE
DESCRIPTORS Conservation Education; Elementary Education; *Elementary School Mathematics; *Environmental Education; *Instructional Materials; Interdisciplinary Approach; *Mathematics Education; Natural Resources; Pollution; *Science Education; Teaching Guides; Water Resources
IDENTIFIERS Elementary Secondary Education Act Title III; ESEA Title III

ABSTRACT

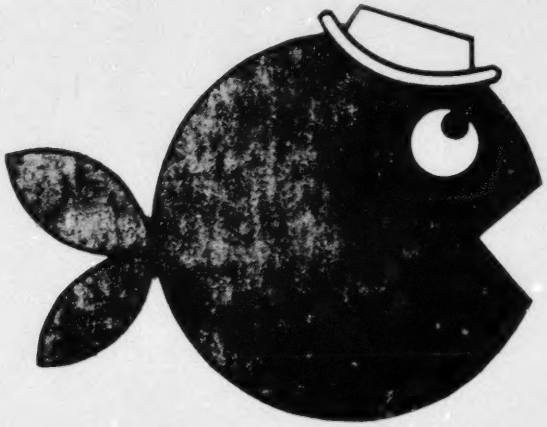
This teacher's guide and study guide are an environmental approach to mathematics education in the primary grades. The mathematical studies of the numerals 0-10, ordinals, number sets, and basic shapes - diamond, circle, square, rectangle, and triangle - are developed through the story of Freddie Fish and his search for clean water. The preservation of wildlife and natural areas, and environmental stress limits are the environmental concepts behind this story of water pollution. The guide includes an illustrated story section, teacher information, objectives, suggested activities, and a post-test to be used after completing the guide. (TK)

A primary environmental study of
basic numerals, sets, ordinals & shapes

Freddie Fish

BEST COPY AVAILABLE

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION



INTERDISCIPLINARY
ENVIRONMENTAL EDUCATION
An ESEA Title III Project
based at Nova High School
BROWARD COUNTY, FLORIDA

SE 018 306

The work presented or reported herein was performed pursuant to a grant from the U. S. Office of Education, Department of Health, Education and Welfare. However, the opinions expressed herein do not necessarily reflect the position or policy of the U. S. Office of Education and no official endorsement by the U. S. Office of Education should be inferred.

INTERDISCIPLINARY ENVIRONMENTAL EDUCATION PROJECT

An ESEA Title III Project
The School Board of Broward County, Florida

BEST COPY AVAILABLE

IEE Offices:

Nova High School
3600 S.W. College Avenue
Fort Lauderdale, Florida 33314

IEE Staff:

William Thrasher, Coordinator
William Monsour, 9-12 Specialist
Nancy Hougendobler, 6-8 Specialist
Marilyn Laskey, Specialist K-5
Elsie Prince, Secretary
Maureen Moyer, Secretary
Ellen Moss, Secretary

WRITER:

Ola Kraynak
Sunland Park School

ARTWORK:

Elsie Prince
Ola Kraynak

Director IEE PROJECT:

John E. Arena

Director NOVA SCHOOLS

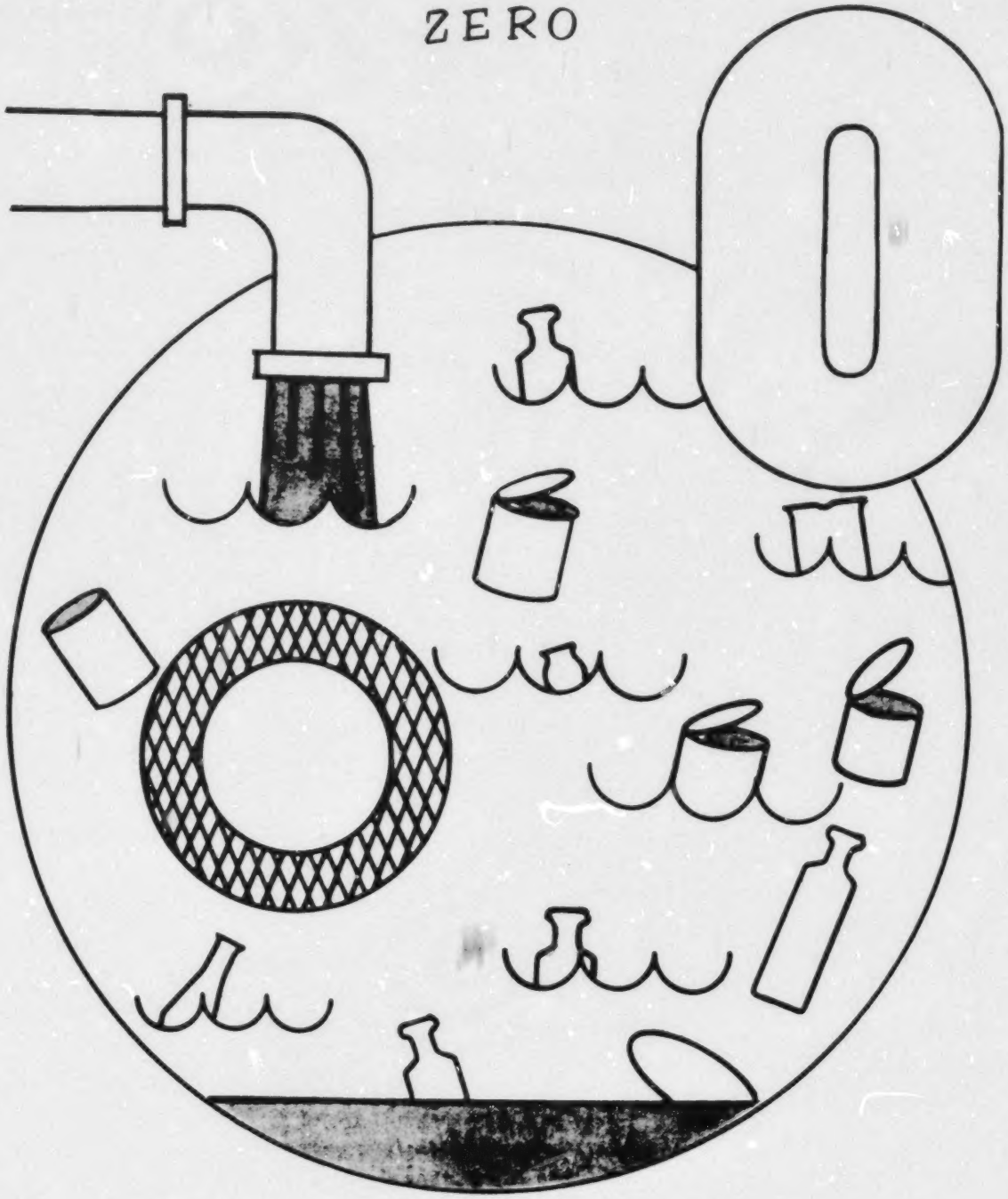
Warren G. Smith

I have reviewed this package for content in terms of curriculum and appropriateness.

John E. Arena
IEE Director

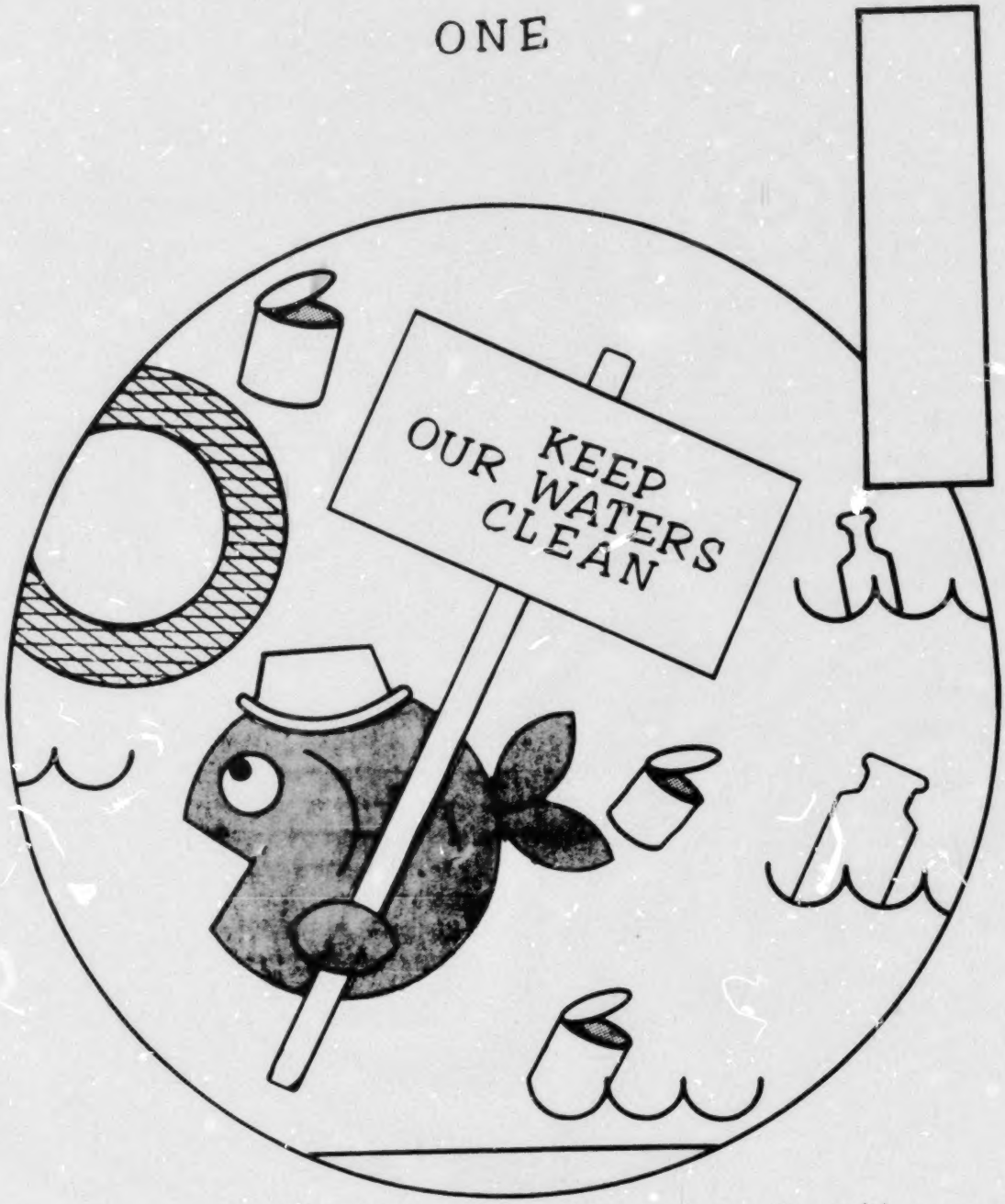
Date 5/14/73

ZERO



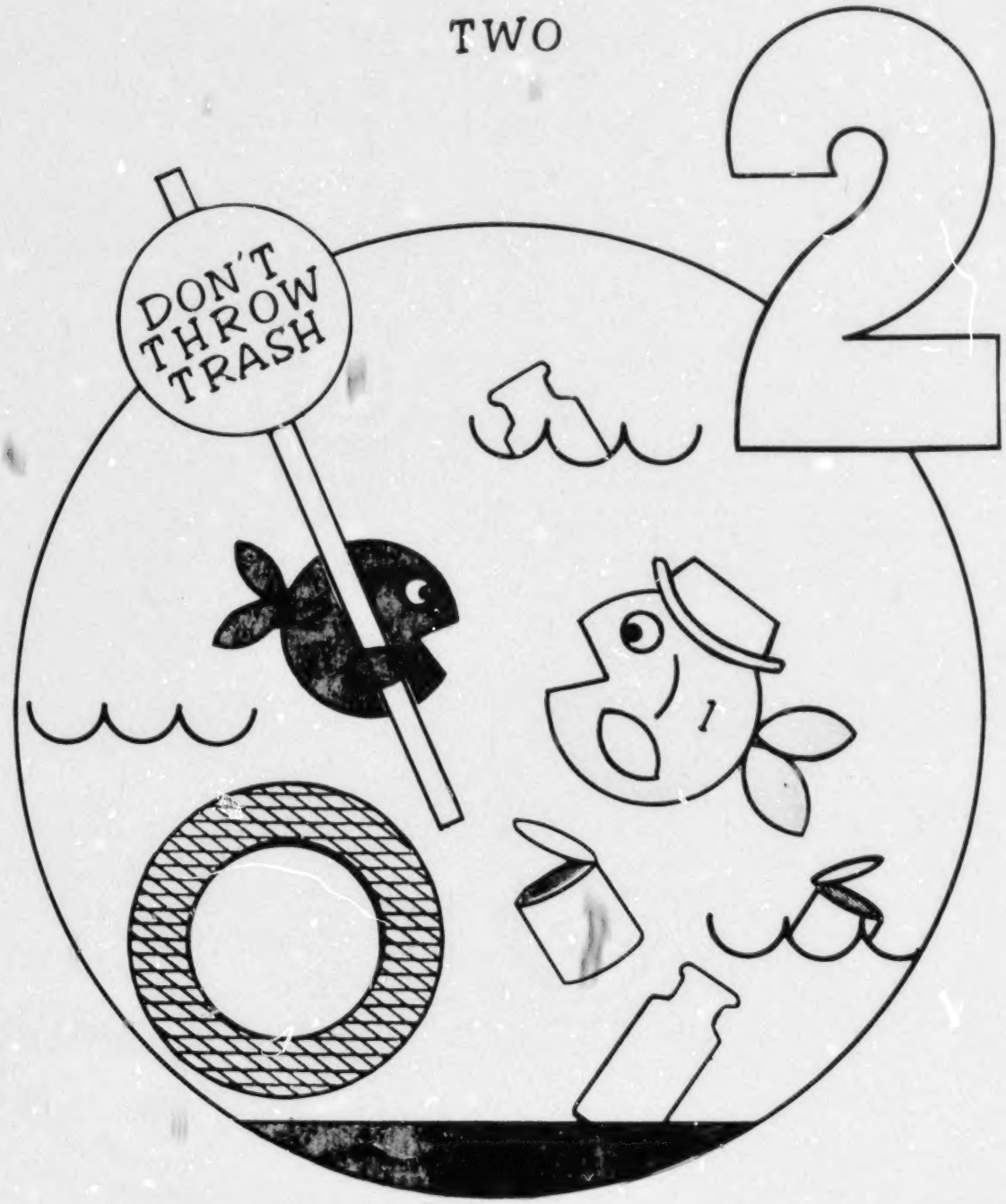
Once there was a pond that had no fish,
because it was very dirty.

ONE



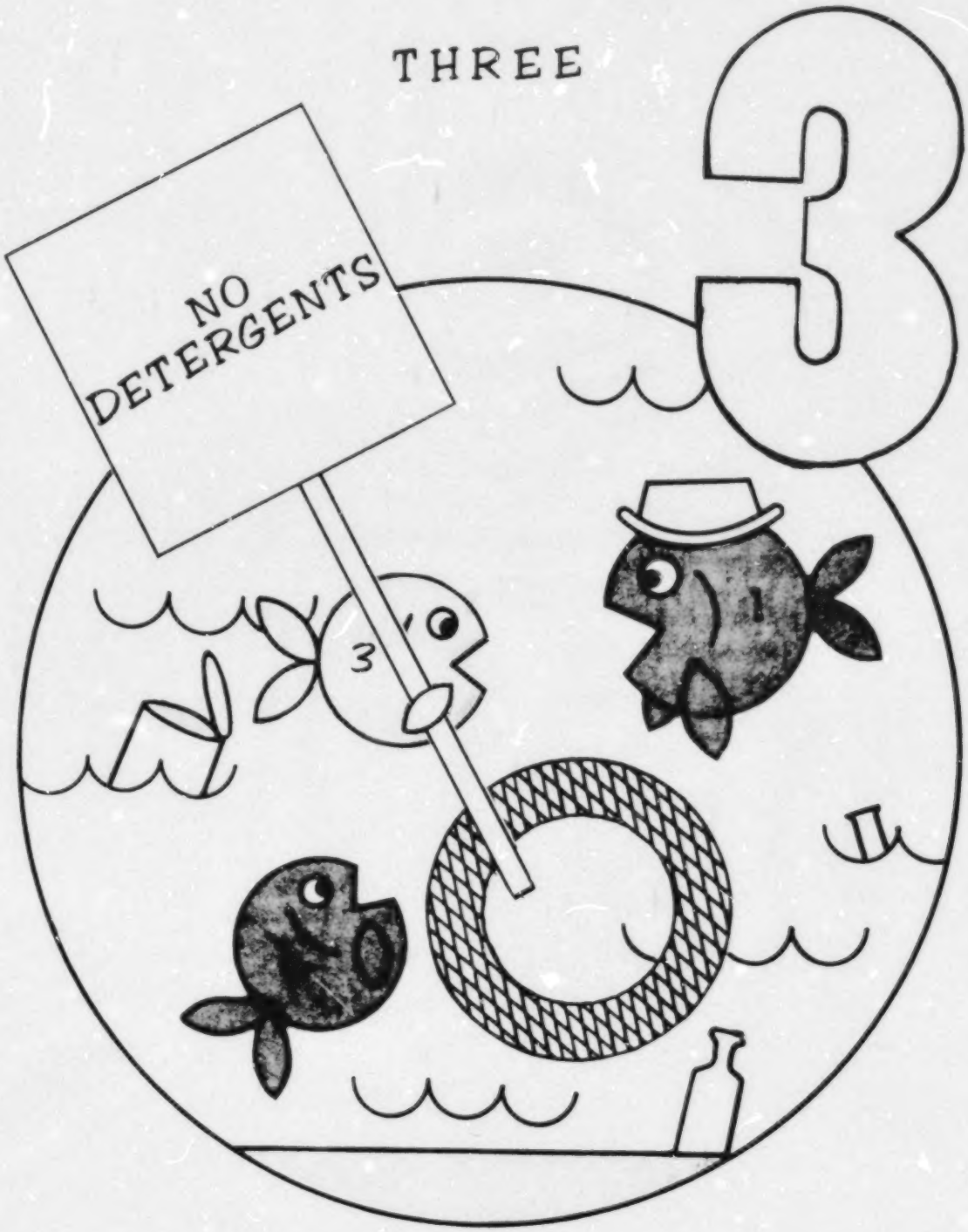
Then some fish began to come to the pond.
The first fish was Freddie
and he made a rectangle sign that said,
"Keep Our Waters Clean!"

TWO



The second fish made a circle sign -
"Don't Throw Trash!"

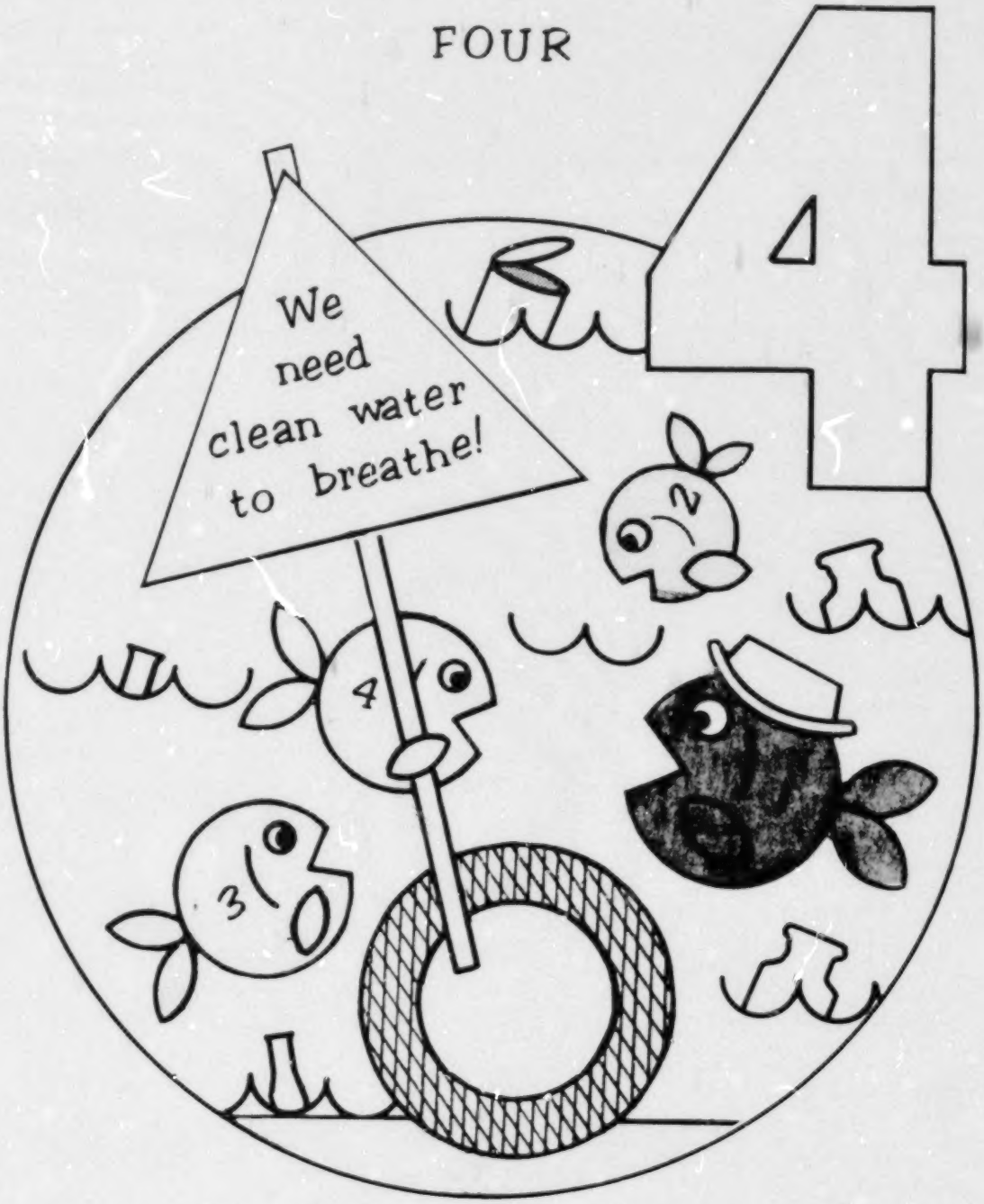
THREE



The third fish made a square sign -

"No Detergents!"

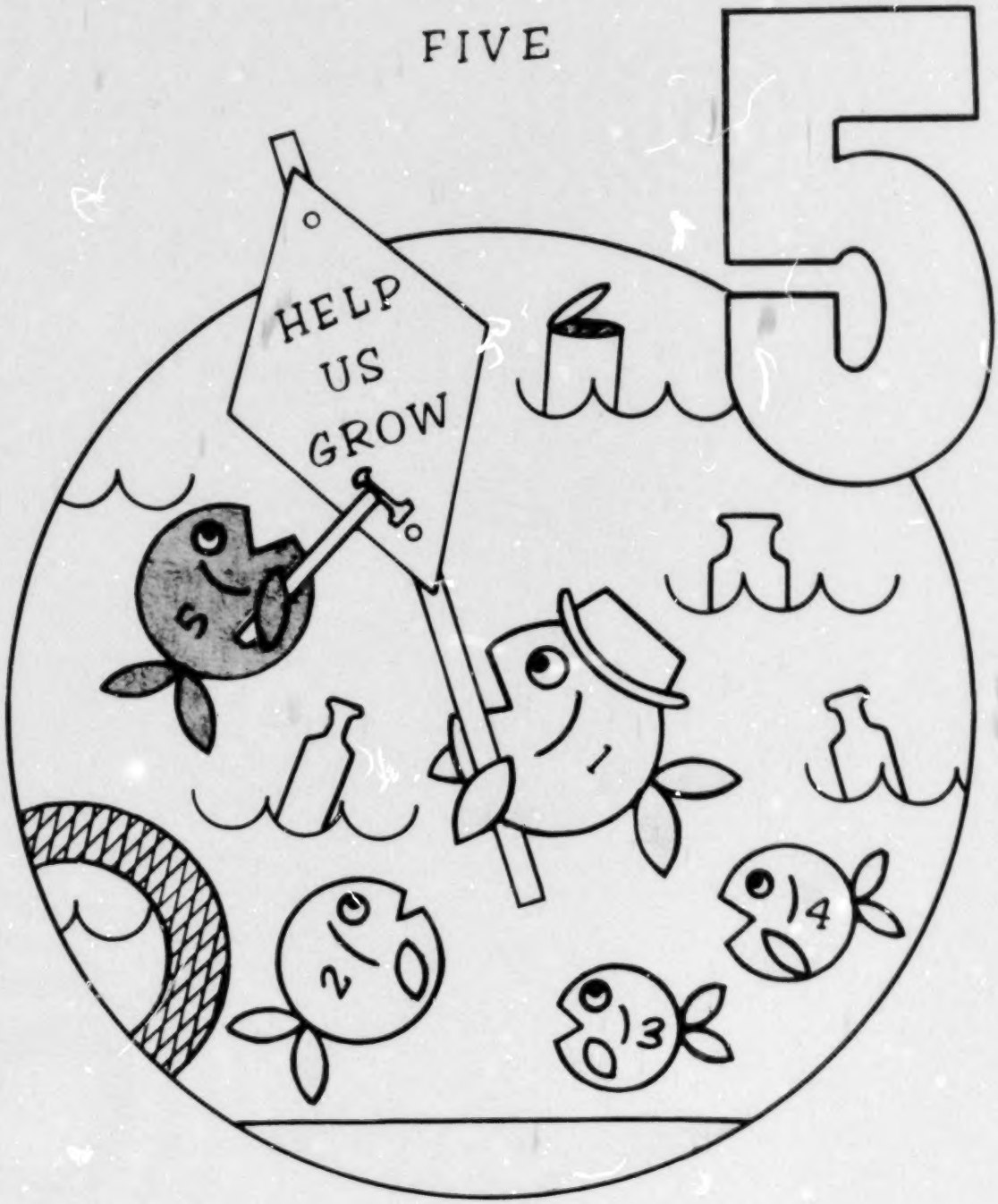
FOUR



The fourth fish made a triangle sign -

"We Need Clean Water To Breathe!"

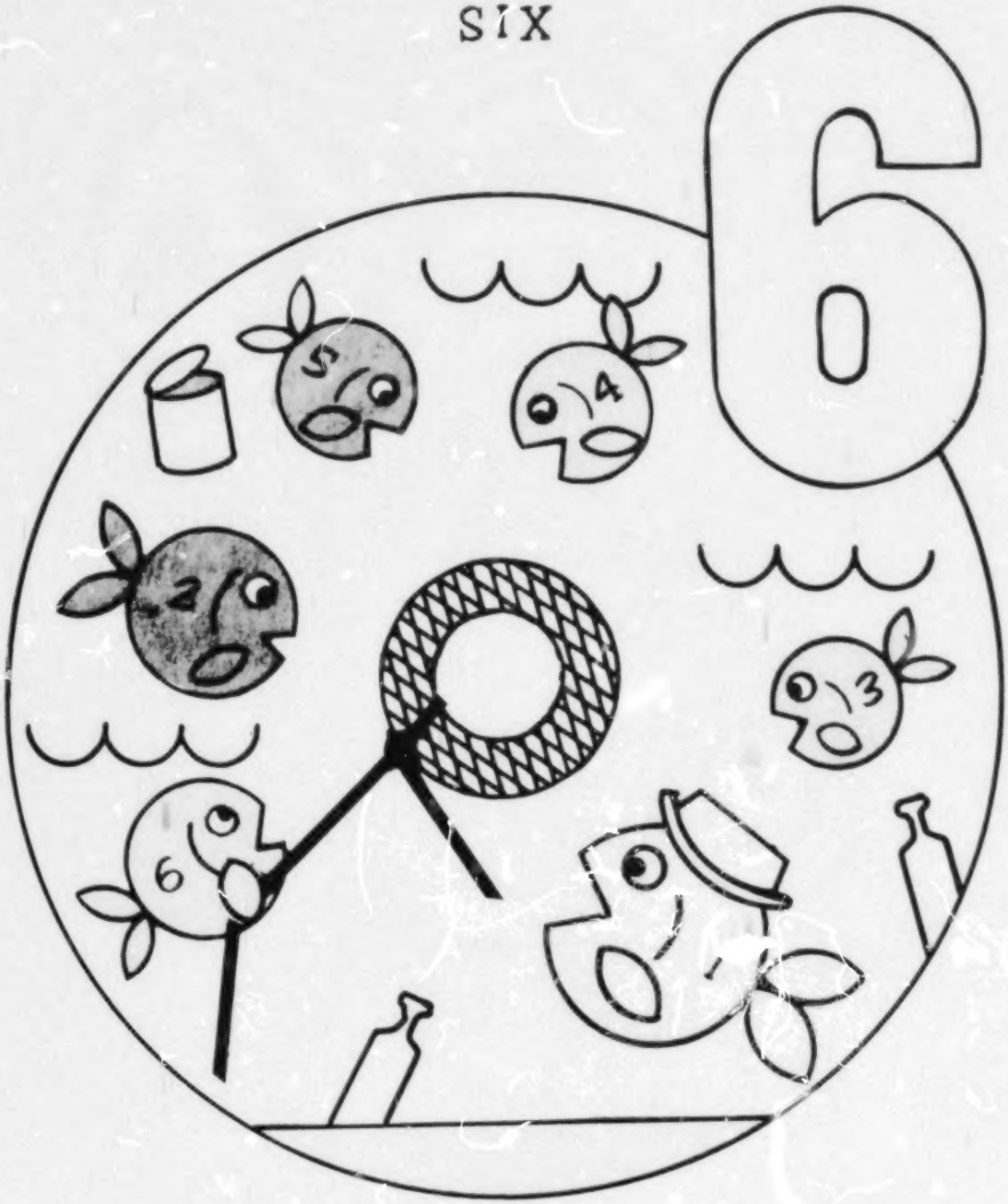
FIVE



The fifth fish made a diamond sign -

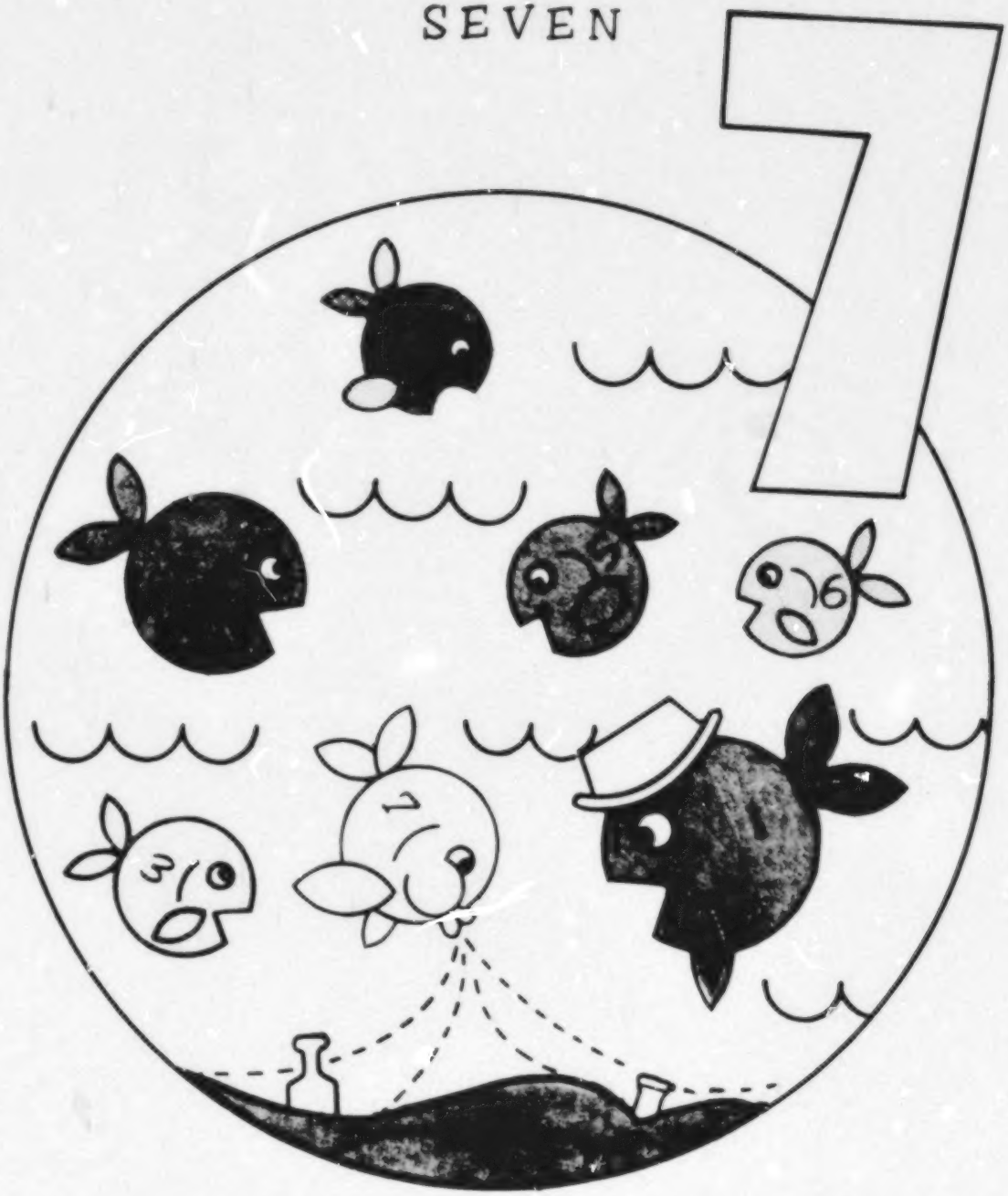
"Help us grow!"

SIX



The sixth fish pulled the tire out of the middle of the pond.

SEVEN



The seventh fish blew sand
over the old bottles.

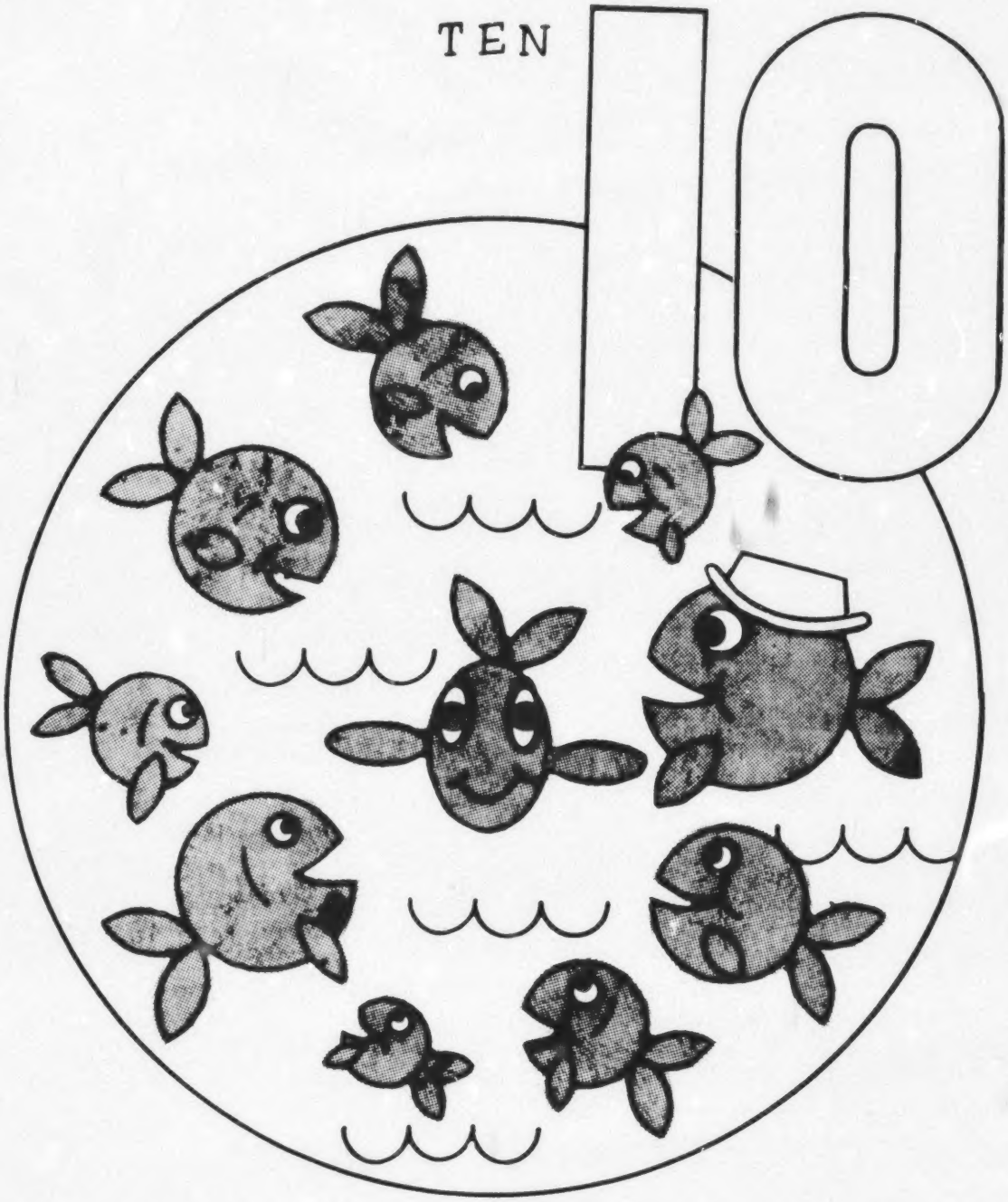
EIGHT

When the eighth fish came,
it was raining, and he said,
"Rain will bring us clean water!"

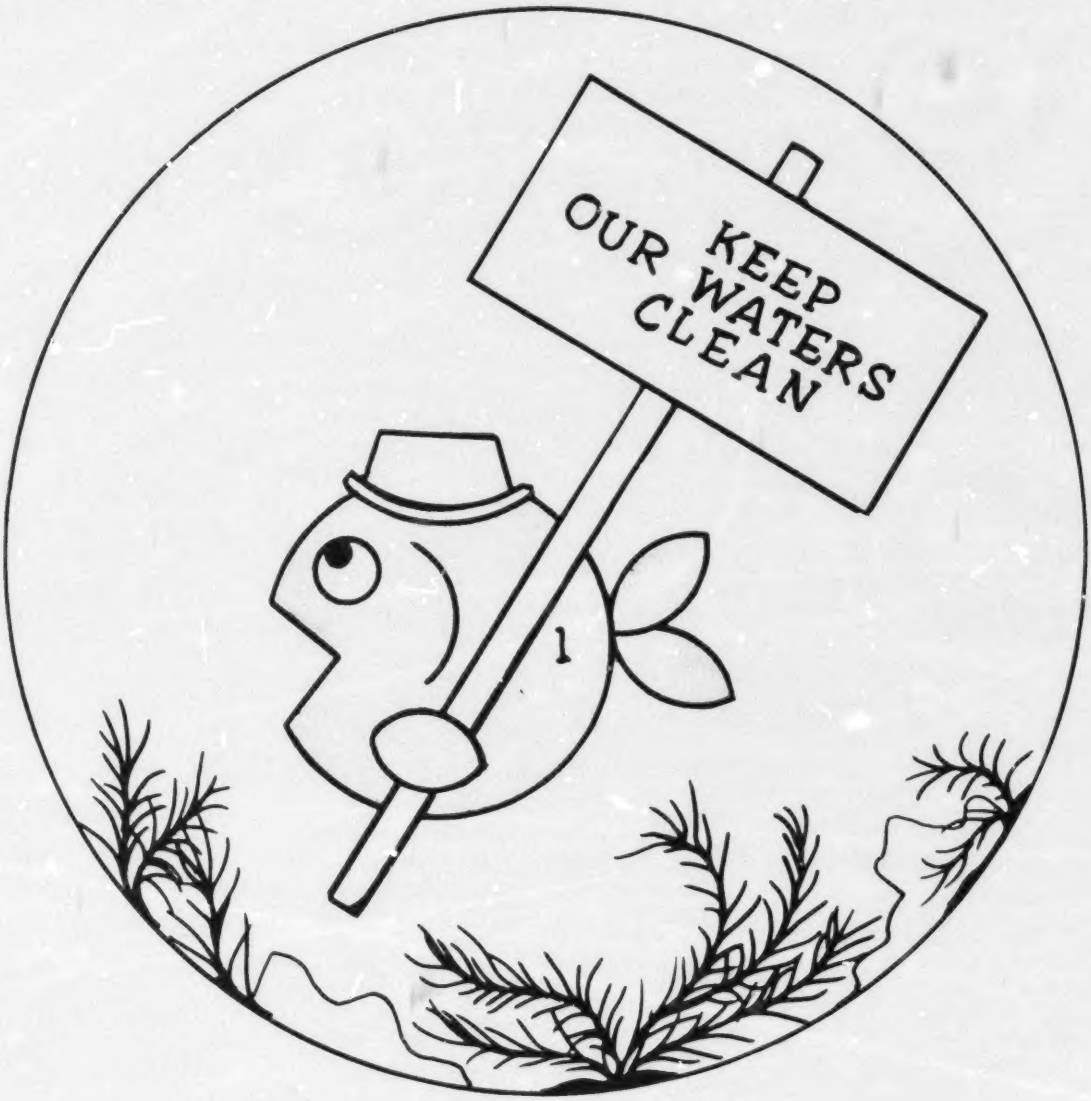
NINE

The ninth fish was so happy to find the pond getting cleaner that he called a friend to follow him.

TEN



The tenth fish quickly followed his friend, and now there are ten happy little fish in the pond that is getting cleaner.



Freddie Fish says,
"Keep Our Waters Clean!"

TEACHER'S GUIDE

Freddie Fish

A study of numerals and sets, 0 - 10, five basic shapes, and ordinals (first through tenth), in a story of water pollution.

CONCEPTS

Wildlife and natural areas need to be preserved. Man is destroying the habitats of many wild species.

Because of adaptation to a particular place in the environment, each type of organism can only live within certain environmental stress limits.

OBJECTIVE

After finishing the booklet, "Freddie Fish", the student should be able to complete the attached test with an increase in competency of 20%.

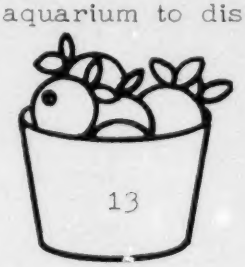
SUGGESTED RELATED ACTIVITIES:

Arrange a basket of cardboard fish for students to place under numerals (in sets).

Play the Shapes Game, "What's Missing?" Put a circle, square, triangle, rectangle, and a diamond on the floor. One student hides his eyes and another hides one of the shapes. First student must guess which shape is missing.

Call attention to ordinal position as the students line up for lunch. (Who is first? second? third? etc.)

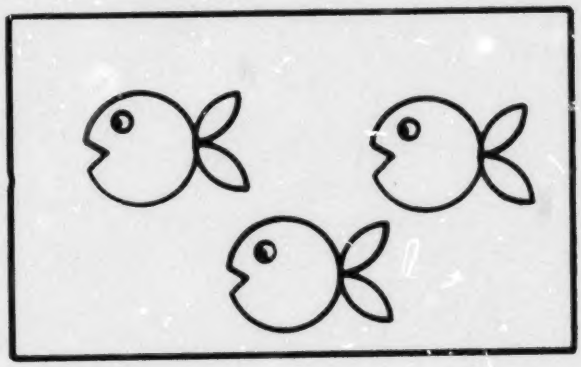
Use a classroom aquarium to discuss the importance of clean water.



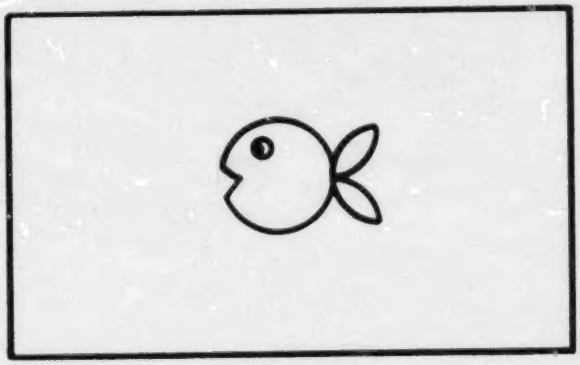
PRE-POST TEST

Draw a line from each numeral to the correct set of fish.

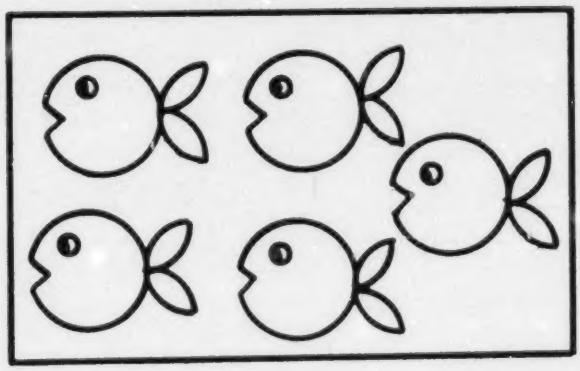
1



5



3

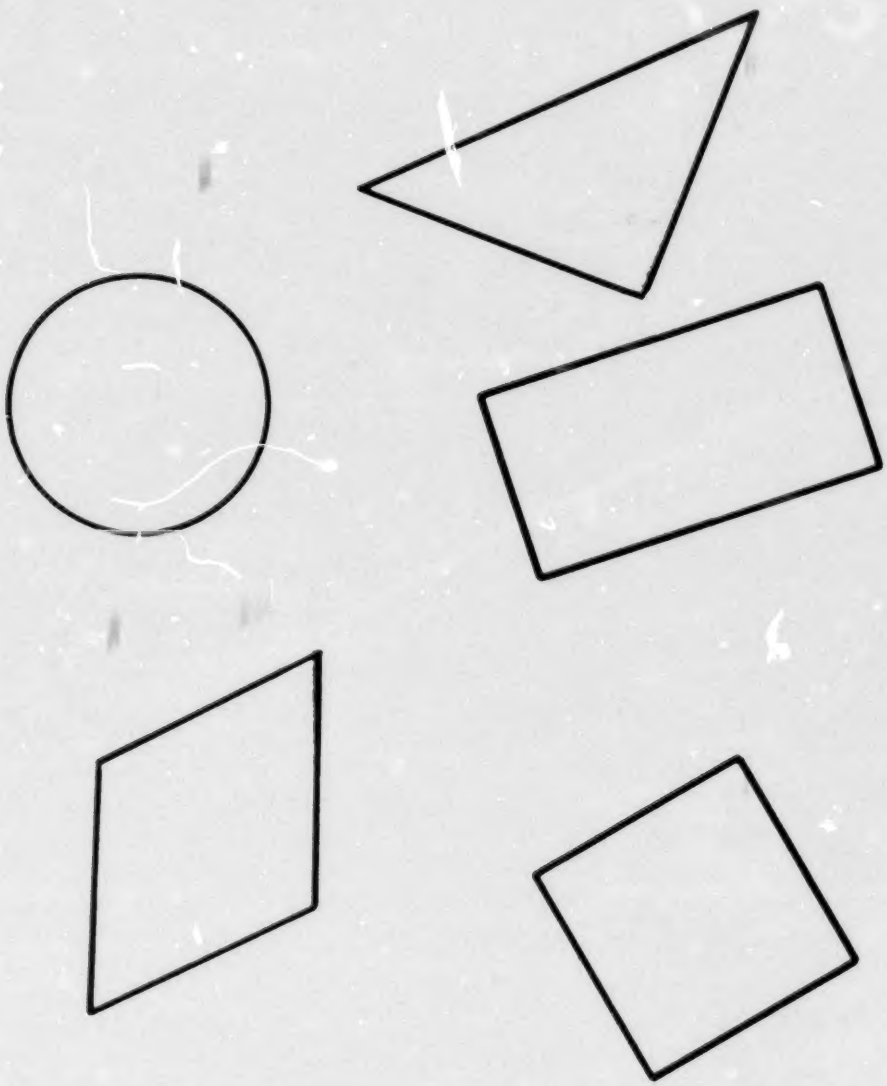


NOTE: This test is to be duplicated for pupil use by the teacher and administered verbally.

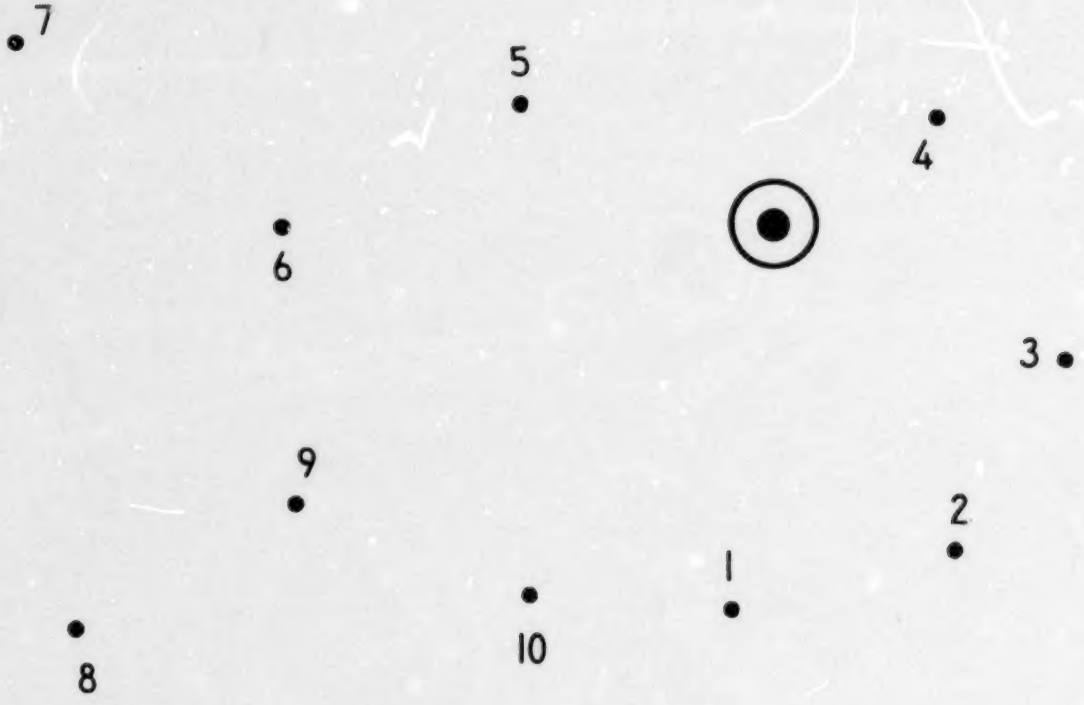
Color the first fish red.
Draw a line under the third fish.
Make a circle around the fifth fish.

One fish lives in clean water.
Color him blue.
One fish lives in dirty water.
Put an X on him.

Color the square green.
Draw a line under the triangle.
Make a circle around the diamond.
Color the circle red.
Make an X on the rectangle.



Follow the dots from 1 to 10.



What did you make?